
Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2008; month=4; day=21; hr=8; min=30; sec=27; ms=387;]

Validated By CRFValidator v 1.0.3

Application No: 10501629 Version No: 2.0

Input Set:

Output Set:

Started: 2008-04-02 14:22:14.024

Finished: 2008-04-02 14:22:15.825

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 801 ms

Total Warnings: 25

Total Errors: 0

No. of SeqIDs Defined: 25

Actual SeqID Count: 25

Error code		Error Description									
W	402	Undefined organism found in <213> in SEQ ID (1)								
W	402	Undefined organism found in <213> in SEQ ID (2)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (3)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (4)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (5)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (6)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (7)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (8)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (9)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (1	0)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (1	1)								
W	402	Undefined organism found in <213> in SEQ ID (1	2)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (1	3)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (1	4)								
M	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (1	5)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (1	6)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (1	7)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (1	8)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (1	9)								
W	402	Undefined organism found in $\langle 213 \rangle$ in SEQ ID (2	0)								

Input Set:

Output Set:

Started: 2008-04-02 14:22:14.024 **Finished:** 2008-04-02 14:22:15.825

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 801 ms

Total Warnings: 25

Total Errors: 0

No. of SeqIDs Defined: 25

Actual SeqID Count: 25

Error code Error Description

This error has occured more than 20 times, will not be displayed

SEQUENCE LISTING

```
<110> Gurskaya, Nadejda
      Fradkov, Arkadiy
      Lukyanov, Sergey
      Punkova, Natalia
<120> Fluorescent Protein From Aequorea Coerulscens And Uses Thereof
<130> EVRO-0006
<140> 10501629
<141> 2004-07-15
<141> 2005-07-15
<160> 25
<170> FastSEQ for Windows Version 4.0
<210> 1
<211> 941
<212> DNA
<213> Aequoria coerulescens
<400> 1
attcaaaaca ctgcagaatt ttggatagat tttcctgcta cttcacacgc ataaaagaca 60
agaaagatga gtaaaggagc agaacttttc actggagttg tcccaattct tattgaatta 120
aatggtgatg ttaatgggca caaattctct gtcagtggag agggcgaagg tgatgcgaca 180
tacggaaagt taacccttaa atttatttgc actacaggaa aactacctgt tccatggcca 240
acacttgtca ctactttctc ttatggtgtt caatgctttt caagatatcc agatcatatg 300
aaacagcatg acttcttcaa gagtgccatg cctgaaggtt atatacagga aagaactata 360
tttttcaaag atgacgggaa ctacaagtcg cgtgctgaag tcaagttcga aggtgatacc 420
ctggttaata gaattgagtt aacaggtact gattttaaag aagatggaaa catccttgga 480
aataaaatgg aatacaacta taacgcacat aatgtataca tcatgacaga caaagcaaaa 540
aatggaatca aagttaactt caaaattaga cacaacattg aagatggaag cgttcaactt 600
gcagaccatt atcaacaaaa tactccaatt ggcgatggcc ctgtcctttt accagataac 660
cattacctgt ccacacaatc taccctttcc aaagatccca acgaaaagag agatcacatg 720
atctattttg agtttgtaac agctgctgcg attacacatg gcatggatga attatacaaa 780
taaatgtata gacttcaagt tgacactaac gtgtccgaac aattactaaa atctcagggt 840
tcctggttaa aatcaggctg agatattatt tacatattat agattcatta gaattattta 900
aatactttat agatgttatt gataggggtt attttcttat t
                                                                   941
<210> 2
<211> 238
<212> PRT
<213> Aequoria coerulescens
Met Ser Lys Gly Ala Glu Leu Phe Thr Gly Val Val Pro Ile Leu Ile
                 5
                                    10
1
Glu Leu Asn Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
                                25
            20
```

Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys

35 40 Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe 55 Ser Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln 70 75 His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Ile Gln Glu Arg 90 85 Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Ser Arg Ala Glu Val 105 Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Thr Gly Thr 120 125 Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly Asn Lys Met Glu Tyr Asn 130 135 140 Tyr Asn Ala His Asn Val Tyr Ile Met Thr Asp Lys Ala Lys Asn Gly 150 155 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val 165 170 175 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro 180 185 Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Thr Leu Ser 200 Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Tyr Phe Glu Phe Val 215 220 Thr Ala Ala Ile Thr His Gly Met Asp Glu Leu Tyr Lys

<210> 3 <211> 717 <212> DNA <213> Aequoria coerulescens

230

<400> 3

235

<210> 4 <211> 238 <212> PRT <213> Aequoria coerulescens

<400> 4

35 40 Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe 55 Ser Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln 70 75 His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Ile Gln Glu Arg 90 85 Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Ser Arg Ala Glu Val 105 Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Thr Gly Thr 120 125 Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly Asn Lys Met Glu Tyr Asn 130 135 140 Tyr Asn Ala His Asn Val Tyr Ile Met Thr Asp Lys Ala Lys Asn Gly 150 155 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val 165 170 175 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro 180 185 Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Thr Leu Ser 200 Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Tyr Phe Gly Phe Val 215 220 Thr Ala Ala Ile Thr His Gly Met Asp Glu Leu Tyr Lys 230 235

<210> 5 <211> 717 <212> DNA <213> Aequoria coerulescens

<400> 5

<210> 6 <211> 238 <212> PRT <213> Aequoria coerulescens

<400> 6

40 Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe 55 Ser Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln 70 75 His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Ile Gln Glu Arg 85 90 Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Ser Arg Ala Glu Val 105 Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Thr Gly Thr 120 125 Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly Asn Lys Met Glu Tyr Asn 135 140 Tyr Asn Ala His Asn Val Tyr Ile Met Thr Asp Lys Ala Lys Asn Gly 150 155 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val 170 165 175 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro 185 Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Thr Leu Ser 200 Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Tyr Phe Gly Phe Val 215 220

Thr Ala Ala Ile Thr His Gly Met Asp Glu Leu Tyr Lys

230

<210> 7 <211> 720 <212> DNA <213> Aequoria coerulescens

<400> 7

atgagtaaag gagcagaact tttcactgga attgtcccaa ttcttattga attaaatggt 60 gatgttaatg ggcacaaatt ctctgtcagt ggagagggcg aaggtgatgc gacatacgga 120 aagttaaccc ttaaatttat ttgcactaca ggaaaactat gacctgttcc atggccaaca 180 cttgtcacta ctttctctta tggtgttcaa tgcttttcaa gatatccaga tcatatgaaa 240 cagcatgact tcttcaagag tgccatgcct gaaggttata tacaggaaag aactatattt 300 ttcgaagatg acgggaacta caagtcgcgt gctgaagtca agttcgaagg tgataccctg 360 gttaatagaa ttgagttaac aggtactgat tttaaagaag atggaaacat ccttggaaat 420 aaaatggaat acaactataa cgcacataat gtatacatca tgacagacaa agcaaaaaat 480 ggaatcaaag ttaacttcaa aattaggca tacaattgaa acaactatac tccaattggc gatggccctg tccttttacc agataaccat 600 tacctgtcca cacaatctac cctttccaaa gatcccaacg aaaagagaga tcacatgatc 660 tattttgggt ttgtaacagc tgctgcgatt acacatggca tggatgaatt atacaaataa 720

235

<210> 8 <211> 238 <212> PRT <213> Aequoria coerulescens

<400> 8

Met Ser Lys Gly Ala Glu Leu Phe Thr Gly Ile Val Pro Ile Leu Ile 1 5 5 10 10 5 15 15 15 Glu Leu Asn Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu 25 25 30

```
Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
                           4.0
Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe
                       5.5
Ser Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
                   7.0
                                       7.5
His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Ile Gln Glu Arg
               85
                                    90
Thr Ile Phe Phe Glu Asp Asp Gly Asn Tyr Lys Ser Arg Ala Glu Val
           100
                               105
Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Thr Gly Thr
                           120
                                                125
Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly Asn Lys Met Glu Tyr Asn
                       135
Tyr Asn Ala His Asn Val Tyr Ile Met Thr Asp Lys Ala Lys Asn Gly
                   150
                                       155
Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
                                    170
               165
Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
                               185
Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Thr Leu Ser
                            200
                                                205
Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Tyr Phe Gly Phe Val
                       215
                                           220
Thr Ala Ala Ile Thr His Gly Met Asp Glu Leu Tyr Lys
225
                    230
                                        235
```

<210> 9 <211> 717 <212> DNA <213> Aequoria coerulescens

<400> 9

<210> 10 <211> 238 <212> PRT <213> Aequoria coerulescens

<400> 10

Met Ser Lys Gly Ala Glu Leu Phe Thr Gly Ile Val Pro Ile Leu Ile 1 5 5 10 10 15 15 Glu Leu Asn Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu 20 25 30

Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys 4.0 Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu 5.5 Ser Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln 7.0 7.5 His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Ile Gln Glu Arg 85 90 Thr Ile Phe Phe Glu Asp Asp Gly Asn Tyr Lys Ser Arg Ala Glu Val 100 105 Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Thr Gly Thr 120 125 Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly Asn Lys Met Glu Tyr Asn 135 Tyr Asn Ala His Asn Val Tyr Ile Met Thr Asp Lys Ala Lys Asn Gly 150 155 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val 170 165 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro 185 Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Thr Leu Ser 200 205 Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Tyr Phe Gly Phe Val 215 220 Thr Ala Ala Ile Thr His Gly Met Asp Glu Leu Tyr Lys 225 230 235

<210> 11

<211> 717

<212> DNA

<213> Aequoria coerulescens

<400> 11

<210> 12

<211> 238

<212> PRT

<213> Aequoria coerulescens

<400> 12

Gly	Glu	Gly	Asp	Ala	Thr	Tyr	Gly	Lys	Leu	Thr	Leu	Lys	Phe	Ile	Cys
		35					40					45			
Thr	Thr	Gly	Lys	Leu	Pro	Val	Pro	Trp	Pro	Thr	Leu	Val	Thr	Thr	Leu
	50					55					60				
Ser	Tyr	Gly	Val	Gln	Суз	Phe	Ser	Arg	Tyr	Pro	Asp	His	Met	Lys	Gln
65					70					75					80
His	Asp	Phe	Phe	Lys	Ser	Ala	Met	Pro	Glu	Gly	Tyr	Ile	Gln	Glu	Arg
				85					90					95	
Thr	Ile	Phe	Phe	Glu	Asp	Asp	Gly	Asn	Tyr	Lys	Ser	Arg	Ala	Glu	Val
			100					105					110		
Lys	Phe	Glu	Gly	Asp	Thr	Leu	Val	Asn	Arg	Ile	Glu	Leu	Thr	Gly	Thr
		115					120					125			
Asp	Phe	Lys	Glu	Asp	Gly	Asn	Ile	Leu	Gly	Asn	Lys	Met	Glu	Tyr	Asn
	130					135					140				
Tyr	Asn	Ala	His	Asn	Val	Tyr	Ile	Met	Thr	Asp	Lys	Ala	Lys	Asn	Gly
145					150					155					160
Ile	Lys	Val	Asn	Phe	Lys	Ile	Arg	His	Asn	Ile	Glu	Asp	Gly	Ser	Val